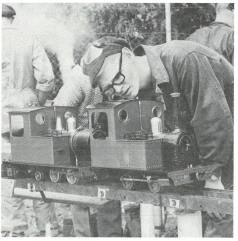
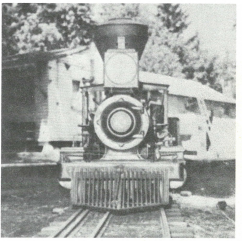
NOVEMBER
DECEMBER
1967

# Live Steam

## The Things We Did Last Summer . . .

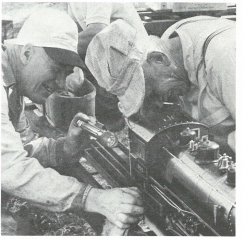


**In Adelaide**



**In Portland**

**In Lake City**



**In Winnipeg**

# Live Steam
magazine

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COVER PHOTOS – Live Steamers around the world enjoyed themselves during the past summer and each of the meets are described in detail within this issue of LIVE STEAM.


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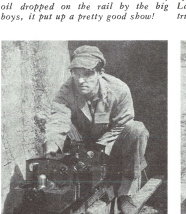
## The Things We Did Last Summer...

*"The Easter Convention went off very well – the Adelaide boys really know their stuff when it comes to running a show like that!*

*"From memory there were about 40 interstate locos present at the meet and all had a good run on the 1600-foot track. The Adelaide track would be about the best in Australia with colour light automatic signals, a 70-foot tunnel and several bridges and viaducts. It's a multi-gauge effort and takes from 2½" to 5" gauge. Most frightening when one has a 2½" 4–4–0 and sees a 5" Pacific bearing down on his backside! Mine was the only 2½" gauge running this year and in spite of questions like "Where do you wind it up?" and "How many volts does it run on?" and blobs of oil dropped on the rail by the big boys, it put up a pretty good show!*

*"As usual at these turns I get my camera out just when everyone puts their engine away but I managed to get a few shots. Dave Smith (cover) and Cliff Kirby (1) of Melbourne double-headed their industrial tanks all week-end. Caught Jack Harvey (2) and the "38" dropping down the dive into the tunnel – it'll pull 18 adults without any bother, hardly even puffs! "Netta" design's showed up in Jim Ranford's (3) model from Sydney and in one built by Barry Glover of Woolongong driven by Len Peckham (4) – both 5" gauge. Lots of equipment on display at the steaming track (5) where I found Neil Campbell of Sydney firing up his 30-year-old 5" Pacific. Reg Wood (6) of Sydney drove by with his 3½" gauge "Heiland Lassie" followed by me (7) on my trusty steed. (Note the surreptitious*



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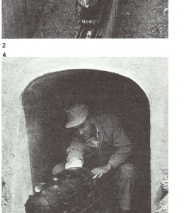

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# In Adelaide, Australia

**A letter and some photos from John Mann in Sydney show that Live Steam Meets present the same problems and pleasures around the world!**

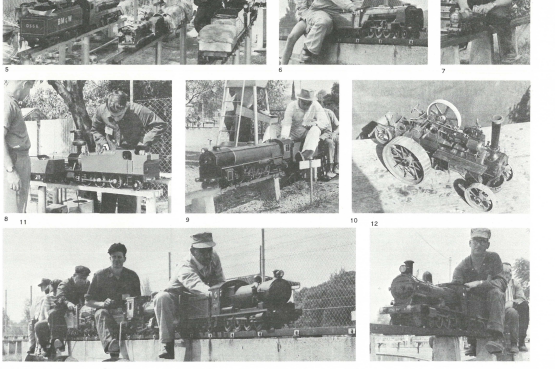
*placing of the right hand on the drag beam. Helps adhesion no end!) It ran for six hours this day without leaving the track (for cleaning, that is.) Chatted while Keith Bradford (8) fired up his 5" "Firefly" and watched John Hurst (9) with his tee-lance 4–8–2 which is about the biggest 5" engine around here. Morry Turners 15" scale "Alichie" traction engine (10) is a beautiful piece of work rivaled only by his 5" gauge "Britannia" Pacific. The sound of a triple-header drew me back to the track where a trio of 5" gauge engines (11) was led by an LBSC "Netta" driven by Len Peckham followed by Barry Tullock of Sydney with a Baldwin-built NSW Railways "J" Class and Neil Campbell with his 4–6–2. Ian Somerville of Sydney (12) with Ray Lee's NSW "P" Class 4–6–0 finished out the day. There isn't a big range of locos built here, mainly "Meisie," "Britannia," and the most popular in Australia would be these two, mainly due to the lack of castings available. 5" gauge is all the rage at present and there are blokes with worried looks everywhere who have got to the boiler stage!*

*"I took three 5" engines to Adelaide in a box trailer behind my car. We loaded up the night before and on inspecting things the next morning I found the axle had bent. Absolute panic! I had to make and weld a truss onto the axle to straighten it up . . . quickest job I ever did. I shouldn't have been surprized, really, as the load consisted of a Pacific, a 4–6–0, a 2–8–0, 3 riding trucks, 3 cwt of coal plus tools and sundries, not to mention a cwt of steel rod I was taking to give the boys in Adelaide.*

*"Things went bad all the way down. We were getting into the car to go and one of the boys kicked the coffee flasks over and broke both of them. We got a couple more but when we stopped about midnight for a break we found the paper bot drink cups were, in fact, cold drink cups. Had all sorts of bother with the trailer at 70 MPH. Never again!*

*"I burned out a generator on the way down, blew a back tyre out and had to throw away another back one which had the tread scrubbed off with the trailer pushing the car across on the corners. All in all I enjoyed the trip even though it was an economic disaster!*

*"If you see Scotty, tell him I haven't forgotten him and still have his films!"*



# The Things We Did Last Summer...
# In Liberty Corners, New Jersey

by PAUL B. BOIVIN, JR.
Editor, NJLS Whistle Blast

The Fourth Annual Fall Meet of the New Jersey Live Steamers was held on September 15, 16 and 17th. Despite the rain that came on Saturday morning from the fringes of hurricane Doria, turnout was as good as ever. Visiting Live Steamers, with their engines, came from Wisconsin, Michigan, Ohio, Maryland, Pennsylvania, New York, Connecticut, Massachusetts and Canada. There seemed to be as much 1½" scale equipment in operation as ¾", but fewer 1" scale models than at previous Meets. 1½" scale, 7¼" gauge is growing steadily as more fellows succumb to the feel of the heavy throttle!

Highlights of this Meet include the 2" scale British carousel built by Fred Fox of Mt. Royal, New Jersey; and the track cleaning car built by the Pennsylvania Live Steamers. The carousel, set up in the Club House due to Saturday's bad weather, is complete and to scale, and folds up into authentic carts as a fully mobile show. It is operated by a steam engine, extemally fed due to difficulty in firing a boiler inside the carousel, and has a dummy model of the pneumatic organ (not calliope!) which was standard with these carousels in Great Britain. A steam-operated generator is also available with this model to power the lights, but was not used in favor of "juice from the mains" on this occasion. Since the display was indoors, the model carousel was operated on air instead of steam.

The PLS 1" scale track cleaner came in handy at this Meet, with rain added to the oily rails! This consists of a tank car with brushes mounted underneath. The brushes rotate and are powered from each truck from a V-belt. The tank is filled with liquid detergent ("Mr. Kleen") which flows onto the rails ahead of the brushes. Brushes rotate as the car is pulled or pushed along the track. This car, along with the sanding car previously demonstrated by PLS, is very handy for any track, and we hope that both can be written up in detail in a future issue of LIVE STEAM. What say, PLS?

Those attending the NJLS Meet included the following:

Three Quarter Inch Scale

| | |
|---|---|
| Edgar Lower, Jr. | 2–4–0 |
| Charles Rowland | 4–4–2 |
| Charles Nass | 4–8–4 |
| Lloyd Proctor "Tom Thumb" | 0–4–0 |
| William Troup "Doris" | 4–4–0 |
| Al Thorp "Tich" | 0–4–0 |
| Ed Loomie "Maisie" | 4–4–2 |
| George White | 0–4–0 |
| James Maxheimer | 4–6–6–4 |
| Tom Sullivan, 3½" ga., 1/10 scale | |
| D & RGW Montezuma | 2–4–0 |
| Eric Corbett B & O D30 | 0–6–0 |
| Larry Edwards | 4–4–2 |
| Earl Allred PRR G-5s | 4–6–0 |
| John Adams | 4–6–4 |
| Carl Purinton | 2–6–0 |
| Oakley Little | 4–6–6T |
| John Senior, Jr. Santa Fe | 2–10–2 |
| Ken Parkinson | 4–6–2 |
| Bruce & Don Tingley | 4–6–2 |
| Paul Boivin, Jr. | 4–6–2 |
| Joel Beecher Tom Thumb | 0–4–0 |
| Percy Levitt | 4–4–2 |
| Pierre Maurer | 4–4–2 |
| Ed Nebauer | 4–8–4 |

One Inch Scale

| | |
|---|---|
| Ken Stone SP | 4–6–2 |
| G. R. Thomas | 2–4–0 |
| H. R. Lytle | 0–6–0 |
| Robert Agnew | 4–6–0 |
| Jack Heath Tom Thumb | 0–4–0 |
| Bud Novy | 2–6–0 |
| Nick Schaub I.C. | 0–6–0 |
| Al Schneider | 2–6–0 |
| George Hoopes, Adrian | |
| Buyse Reading | 4–6–2 |
| Ron Pett | 4–6–2 |
| Lew Bullock | 4–6–2 |
| J. Tardif | 4–6–2 |
| Justin Hess | 4–4–0 |
| Ed Kruckeberg | 4–6–2 |

One and One Half Inch Scale

| | |
|---|---|
| Paul B. Culp Br. LMS | 4–4–0 |
| Daniel A. Culp | 4–6–0 |
| Jim Turnbull, South African | |
| Railway 2–6–0 + | 0–6–2 |
| Ben Nixon Royal Scot | 4–6–0 |
| Al Roedding | 4–4–0 |
| Ted Howell | 4–4–0 |
| Halsted Park, Jr. | 4–4–0 |
| Frank Drescher | 4–4–2 |
| John Muldowney | 2–6–0 |

There were also over a dozen stationary steam engines under power from Walter Kleinfelder's boiler, but we unfortunately did not get the names of the owners of each engine. Larry Edwards "life tested" one of his headlight generators for better than 20 hours without failure, and kept Walt busy keeping up steam!

Also seen around the grounds but without equipment were Pershing G. Scott of Marion, Iowa, and Len Woerner who always accompanies Jim Turnbull when Jim brings out his 1½" equipment from Montreal!

Indeed, this was a memorable weekend for the boys at NJLS. Late Sunday night, as the volunteer cooks will tell you, one couldn't tell the hamburgers from the charcoal! It's amazing what the stomach can take at these outdoor events!

*FRED G. JEROME of Maywooth, Ontario, passed away on October 5th, 1967, "Old Fred," as he was known to his friends, suffered a stroke in August, 1963 and a second stroke in April of this year. Fred was 73.*

*Fred came to Canada originally in 1911 from Croydon, England and returned to serve in the R. A. F. during both World Wars. He retired from his position as Inspector in the Ontario Provincial Police in 1939 and after World War II went into tool and die making until his retirement from that field in 1963.*

*Old Fred's first scale model was a C.N.R. diesel completed in 1929 which will be displayed in Toronto at the Centennial Centre of Science and Technology. During the 'thirties he built his first Live Steam locomotive model, a ¾" 4–8–4 and at the time of his first stroke was working on his second model, which was nearly finished.*

*He was one of the original members of the Toronto Society of Model Engineers and attended meets in Montreal, Massachusetts, Toronto and Diamond Point.*

*His wife, Daisy, lives with daughter, Joan (Mrs. George Scott) in Maynooth. Surviving also are two sons: Douglas in Toronto and Stuart in Labrador.*

*The sympathies of all Live Steamers are extended to the family and all of us will miss "Old Fred."*

# In Winnipeg, Manitoba

by PAUL WINSLOW,
Secretary, Red River Valley Railroad
PHOTOS: H. E. BRAKKE

September 2nd, 3rd, and 4th saw much activity and fellowship in Winnipeg, Manitoba, with the RRVR Annual Labour Day weekend meet.

On September 2nd, "Old #3" of which the Manitoba Live Steamers' Association has become custodians, was steamed up for several runs. In the evening, a fine get-together was held at the home of Ralph Grant, the RRVR Club President.

On September 3rd and 4th, activity shifted to the RRVR track. A picnic luncheon was given by the wives of RRVR Club members that day.

Present with their engines were:

Three Quarter Inch Scale

| | |
|---|---|
| Hue Brakke | 4–6–2 |
| Ted Cotton | 4–6–2 |
| Carl Hanson | 0–6–0 |
| Paul Winslow | 4–8–4 |

One Inch Scale (5" gauge)

| | |
|---|---|
| Jack Collier | 0–4–0 |
| John LePage | 0–4–0 |

Hue Brakke from St. Paul, Minnesota, was our only out-of-town visitor; all the others are from Winnipeg. Also present, but could not bring their locomotives were Jack Kerr and Ralph Grant, both of Winnipeg.

The weather was ideal, and many visitors to the track were thrilled to ride behind steam once more.

The COVER PHOTO shows Jack Kerr (left) helping Carl Hanson clean the flues on Carl's 0–6–0, Carl's 0–6–0 (1) and 4–4–0 (2) are fine pieces of equipment. Ted Cotton (3) with his "Britannia" and Paul Winslow (4) with his CNR 4–8–4 showed excellent examples of steam power in England and Canada.

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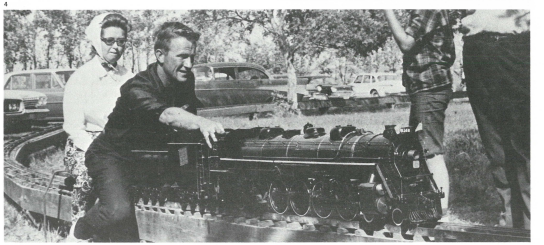


# The Things We Did Last Summer...

by HARRY S. HARVEY
Pacific Northwest Live Steamers

The Pacific Northwest Live Steamers is a growing organization of 81 strong who meet regularly at Shady Dell, about 32 miles south of Portland, Oregon. A beautifully landscaped two-acre site is being purchased by the club from Mr. and Mrs. H. S. Harvey who began to develop the grounds and facilities in 1955, prior to formation of the club in 1963. The original loop of 4¼" gauge track 100 feet in diameter was started by such early model railroaders as Harry Harvey, A. B. Clancy, Earnie Middow, E. D. Mass and Gene Moel and gradually grew into the present 1,400 feet of 1" and 1½" mainline track plus 600 feet of sidings and service tracks. Minimum radius on the main line is 50 feet with some 1½% grade and a short piece of 2½% grade to make the engines work. There are usually two to ten engines running every Sunday with 25 cars for riding from May first to October fifteenth.

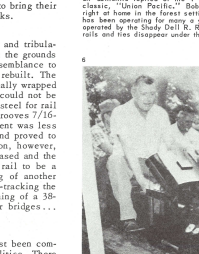
Several of the club members have engines in the planning and construction stage and it is expected that there will be as many as twenty engines in operation in 1968. Outside club members are always welcome to bring their locomotives and run on the 1" and 1½" tracks.

Shady Dell has not been without trials and tribulations. In 1962 a windstorm did not overlook the grounds and flooding in 1960 and 1964 left little resemblance to the park of today, but each time it was rebuilt. The original 1" scale aluminum tracks were literally wrapped around the trees by the flood of 1960 and could not be reused. The new 3-rail track utilized ¾ x ¾ steel for rail and a rabbeting machine was built to cut 3 grooves 7/16-inch deep in 2 x 2 x 14 ties. This arrangement was less expensive than aluminum rail and spikes and proved to be very satisfactory. Since that installation, however, the number of 1½" scale engines has increased and the larger weights and sizes are showing the rail to be a little light. Plans now include the laying of another heavier track parallel to the old one, double-tracking the whole system which will involve the widening of a 38-foot, a 40-foot, a 16-foot and two shorter bridges... quite a project!

A 16 x 32 foot concrete building has just been completed for shop, storage and lavatory facilities. There is also a covered patio with cooking facilities, 14 picnic tables, a deep waterway, good swimming area and 2 rowboats, plus a 17-foot steam-powered sternwheeler under construction. There are also 6 steamboats ranging from 12 feet to 25 feet whose owners are interested in the Shady Dell R.R.

1

Open doors on the Shady Dell roundhouse (1) reveal Harry Harvey's 1" Southern Pacific 4-6-2, Walter Beebe's 1" diesel, Harry Harvey's 1½" Virginia & Truckee "J. W. Bowker" 2-4-0 and his 1½" "Grasshopper." Walt Beebe's 1½" Atlantic (2) performs as well as it looks and Joe Gerling's 1" 4-8-4 (3) has covered many a happy mile on the Shady Dell tracks, Harry Harvey's "Grasshopper" (4) is an 1½" model of an early B & O locomotive and his "J. W. Bowker" (5) is an authentic replica of the V & T engine that starred in the film classic, "Union Pacific." Bob Lee's 1½" scale Heisler (6) looks right at home in the forest setting and Walter Beebe's 1" diesel (7) has been operating for many a year now. On right-of-way such as is operated by the Shady Dell R. R., (8) it's a real thrill to watch those rails and ties disappear under the pilot or your engine!



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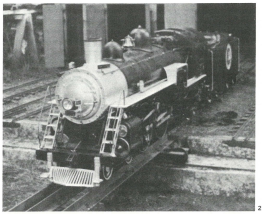
# In Portland, Oregon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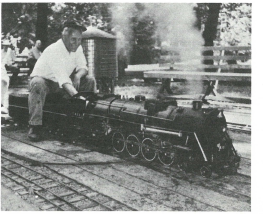
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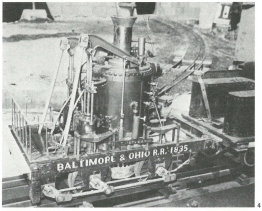

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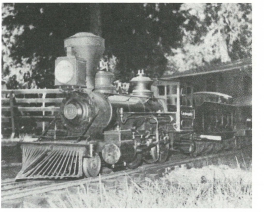
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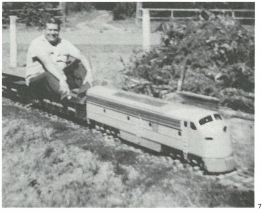
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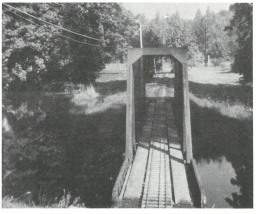
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## The Things We Did Last Summer...

# In Iowa

by P. G. "SCOTTY" SCOTT
Secretary, Iowa Model Steam Engineers

For the first meet at the new track at our new home near Marion, Iowa, the weather was with us — it couldn't have been custom-ordered any better!

We had three 1½" engines on the track and they all performed very well. Very few derailments which was a great surprise to me as some of the track was sticking up on high fills and ballast and moving like a flag in the wind.

Just about all of the members showed up even though there was no 5/0" or 1" track ready. They really had a good time running the big ones and getting together to lay out their track. Most of all it was the first time that everyone could just sit and beat their gums 'til they got run down.

We put on a big roast beef and ham dinner on Saturday night — had 50 eating in the new double garage. Everyone was quite pleased that they didn't have to get cleaned up to go out and eat.

The ladies really enjoyed it to be able to sit in the living room and be able to see most of the activities. Have a big bay window to view it from with no bugs and stuff to agitate.

Went to Illinois and got Ray Whitaker's new Hudson. She did a fine job on the first time on a track. Only thing wrong was not enough up-and-down motion on the pilot for going over the ups-and-downs on the new track so we took it off and everything went along in top shape. Clint Elliott brought his 1½" 0–4–0 version of George Taylor's famous Little Lulu in ⅜" scale. This is a work-horse and took the 4% grade like nothing, hauling a good load as well. They used about 400# of coal so you know they were really running!

*CHARLES STANLEY CHOVIL, 71, suffered a fatal stroke on October 4th, 1967. He was a retired nurseryman and horticulturist and a veteran of World War I.*

*Stan started out years ago in Live Steam with a ½" scale 4–6–2 and later he ran his ¾" scale 4–4–2 for many years at the SCLS and LALS tracks. His last engine was a 1" scale "Tweetsie" 4–6–0 which he disposed of when his health started to fail.*

*Stan was a Charter Member of both the SCLS and LALS, and served as Fourth President of the Southern California Live Steam Club.*

*Surviving are his wife, Helen, a daughter and a son, to whom the sympathies of all Live Steamers are extended. His many friends in the hobby will miss him, too.*

# OVERFAIR ENGINES RUN AGAIN!

*Photos and Report by JOEL TEDDER*

1

2

An 0–6–0T and two Pacifics, one partially completed, have been acquired recently by the Overfair Corporation of Wilmington, California, for a live steam run planned for the waterfront at Los Angeles harbor.

The engines were originally built by Louis MacDermot for his Overfair Railway which operated along the waterfront at the Panama Pacific International Exposition grounds in San Francisco in 1915. All were sold out of the estate when MacDermot died to Billy Jones, a railroad engineer of Los Gatos, California. They have been stored, have been used very little and are in amazingly good condition. Some of the small parts had been taken off, though, and now must be replaced to put the engines in top condition for the run planned.

The new railroad's name (a jawbreaker) Catalina – Ports O'Call & Cabrillo Railroad Company, names the major points along the waterfront between the Catalina Island Terminal and Cabrillo Beach . . . the intention being to extend the line to the beach at a later date.

It was a real thrill to see the tanker, #1500, under steam (1) on September 9th, 1967. Through the open shop door (2) we could see 4–6–2 #1914 and the chassis of #1915 which had never been completed. It is now ready for the boiler. The speeder at the right of the photo was built in the company shops for track inspection.

We believe these are the only 1/3 scale, 18¾" gauge engines in existance. "Quent" Jervis, Executive Vice President and John Mueller, Foreman, are taking great pride in the authentic restoration of the equipment. The original cars and car trucks are in poor condition now and the trucks are being rebuilt to eliminate the original wood beams. Present safety standards have dictated redesign of the braking system and cost factors have caused the adoption of the trucking industry air braking system where parts are available at reasonable cost.

Car roof design will add an authentic touch. Even though fiberglass is to be used, (the mold is ready for production) clerestory window openings in the roof will help retain a picture of the era in which the locomotives were built.

Your reporter wishes to thank Quent Jervis for the invitation to see #1500 under steam again!

The Things We Did Last Summer...

# In Lake City, Minnesota

by RICHARD M. WINKLE
President,
Southern Minnesota Live Steamer Association
PHOTOS BY H. E. BRAKKE

Al O'Neil was host to the Southern Minnesota Live Steamer Association on August 12th and 13th, and Live Steamers from miles around came to join in the festivities!

Al's half-mile rectilinear loop of 3½" and 4¾" track is built of steel bridge sections on cement piers, with a transfer table to enter and leave the main line. There is sufficient grade to make all engines work.

Al operated his 12" gauge 4–4–0 (1) around the ½-mile oval... past the roundhouse and turntable for his other three engines.

Ray Grosser of St. Cloud (2) brought his 1" 4–6–2; Don Strom of Wayzata (3) had his newly-completed ¾" 2–8–4 with working booster; Hue Brakke of St. Paul with his ¾" 4–6–2; Larry Edwards of Green Bay, Wisconsin (4) with his ¾" 4–4–2; Harry Peotter of Clintonville, Wisconsin ran his ¾" 4–6–4; Ed Kolasinski of Menasha, Wisconsin (5) brought his ¾" 4–6–4; Gene Stewart of Racine, Minnesota and his ¾" 4–4–2; Donald Denzin from Ripon, Wisconsin with his ¾" 4–4–0; all had plenty of chance to run and to visit!

Other Minnesota Live Steamers who attended were Lee Tuskey from White Bear Lake, William Goesch of Minneapolis, Robert Ahrens from St. Paul, Dennis Andres from Duluth and H. E. Nash of Dodge Center. Iowa was represented by R. W. Christensen of Des Moines (6-running Hue Brakke's 4–6–2 with Terry Winkle as passenger) and Russell Enokson from Armstrong.

1

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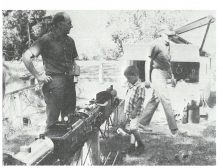

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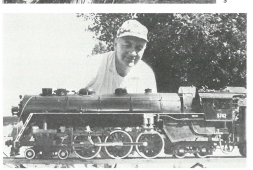

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# In Lorain, Ohio

by M. D. "SNUB" POLLARD

A small meet was held September 17th on the backyard oval of the Buckeye Central Railroad at the home of "Snub" Pollard of Lorain, Ohio. ¾" and 1" is available on the 148' ground oval with a hydraulic lift to the portable steaming bays. Six engines were present, plus a working traction engine by Bob Ebert of Wooster, Ohio.

Those present were:

| | |
|---|---|
| Ralph Knox (1) Dayton | 0–4–0 |
| Albert Barkdul Shelby | 0–4–0 |
| Bruce Blackman (2) Mentor | 2–4–2 |
| Jack Jennings (3) Circleville | 4–4–2T |
| Snub Pollard Lorain | 0–6–0 |

One Inch Scale

| | |
|---|---|
| Snub Pollard Lorain | 4–4–2 |

Traction Engine (4)

Bob Ebert – (5 with Snub Pollard's 4–4–2) Wooster

Fred Bonacker from Niagara Falls was welcomed as a visitor.

The ladies (6–Betty Barkdul, Ginny Pollard and Gladys Knox) were quite busy with the kitchen details with time out for a little antiquing.

We hope the good time had will justify future gatherings at this track.

1

2

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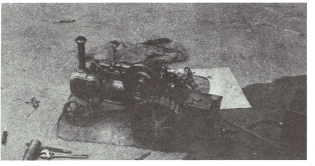

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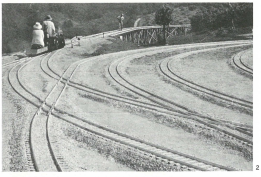
# In Santa Barbara, California

Photos and Report
by ROBERT B. STRAND

The Fourth of July Meet at the Goleta Valley track saw about 25 1½" scale engines in operation at one time or another providing lots of activity for Live Steamers.

Dick Priest with his *Daylight* 4–8–4 (1) waits at the station as Earl Chanda roars by with his V & T 4–4–0 with a sway-back box car in tow. Clyde Johnson and his wife are approaching the double crossover (2) with his 2–8–4 heading for Horseshoe Trestle. Paul Conover is the crafter of these trackwork gems. Seymour Johnson (3) had his 15" gauge 4–4–2 operating and he seemed more than pleased with its operation. It was built by Larry Witherell in Boston in the early Fifties. A water stop "at the top" (4) where a turntable marks the temporary end of track about fifty feet farther up. Ken Graham's 4–6–2 (5) blows down over Horseshoe Trestle. This super machine burns propane and has some of the finest fittings I've ever seen... such as a satin-finish throttle lever with umpteen stainless steel parts. A fellow can sure get hooked on steam in surroundings such as these!

1



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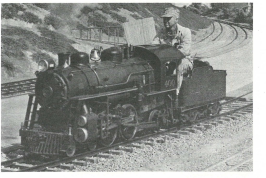

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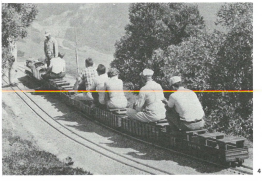

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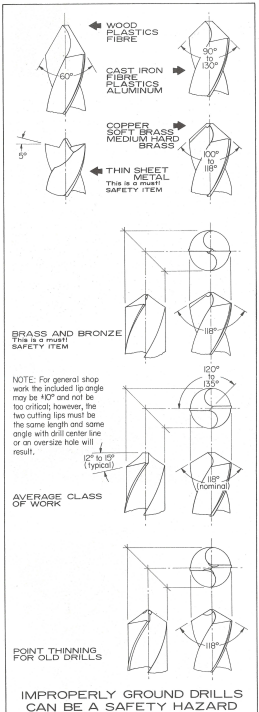



SO YOU WANT TO BUILD A LIVE STEAM LOCOMOTIVE

CHAPTER 7

by Joseph F. Nelson

# CORRECTION

When both Author and Editor-Draftsman team up on sins of ommission as well as sins of commission, it's time to stop, step back and start over again! So it is with the data included with Part I of Chapter 7 on SHOP SAFETY PRECAUTIONS.

We chalked up two apiece on the drawings of drill grindings in not showing that the rake (helix twist) is removed in some instances, giving "0" rake and that magnesium was included where it shouldn't have been shown at all.

The drawing has been corrected and is reproduced at the left in its revised form. We apologize for the oversight.

# A LIVE STEAM DOUBLE-HEADER

*"We'll run 'er 'til she leaves the rails . . . "* and come to think of it, that's about all that hasn't happened to LIVE STEAM in the last few months!!! We've had SLOW ORDERS at every station, we've been put on the siding for all sorts of special trains (of thought), we've had hot boxes (in the form of an oil space heater that blew up three times on a temporary installation) and bad-ordered equipment (when an old bed-hewn beam cracked and had to be shored up) and in spite of lots of good fuel from our readers, the crew has been unable to tend the fires . . . and poor steaming has been the cause of many late arrivals!

Out of this chaos, then, had to come decisions in lieu of production and this double-headed November-December issue is the result. A little arithmetic showed us that we could get more editorial coverage in one 24-page issue than we could with two 12-pagers. Layout time might be cut a little because all materials would be at hand and we could work right through until that phase of the work was complete. Set-up time for the printing operation would be no more for a 24-page issue than for 12, speeding up the schedule.

On the other hand, a combination issue would lose one month's income from advertising but that, we decided, would have to be chalked up as brownies against the crew.

Remodelling work on our home and the new quarters for LIVE STEAM is progressing satisfactorily although confusion currently reigns. When this is all complete, the room where we now try to work will become a family room and an invitation will be extended to all Live Steamers to stop in and visit. In view of all the remnants of three-foot gauge logging tracks that still are visible through the forests around here (where Ephriam Shay's first engines operated) we have decided that this room would be appropriately named the "Shay's Lounge." The welcome mat should be out soon.

PART THREE

# CYLINDERS AND THEIR MOVING PARTS

SO YOU WANT TO BUILD A LIVE STEAM LOCOMOTIVE

by Joseph F. Nelson

CHAPTER 7

## MOVING PARTS

It is important that the slide valve and seat be flat in order to be steam tight; otherwise, leakage with power loss will occur. Lapping the valve and seat with an abrasive will work satisfactorily with cast iron valves and seats so long as the abrasive is removed from the ports after the lapping is completed. Do not attempt this procedure with bronze valves or valve seats since the abrasive will imbed itself into the relatively soft bronze (called charging) and create all sorts of trouble at some later date. To "spot" a valve and seat, rub the two together under pressure until bright spots show, then remove the spots with a flexible small fine file. It must be noted that the professional uses Prussian Blue for spotting, but this isn't recommended for the novice since the novice will smear it on too thick and get a worthless indication. The spotting should be continued until at least 75% of the surfaces show bright when rubbed together under pressure. Special care must be taken when filing the surfaces so as not to encounter the optician's bugaboo: the turned edge. Try to avoid the edge when filing – it will take care of itself.

A means must be provided to secure the valve stem to the valve so as to provide about .002" end clearance between the stem and the valve so that the valve will be free to follow its normal movement and not be held rigidly by a possible bent valve stem.

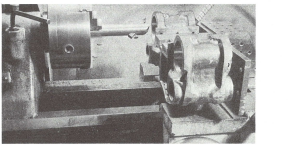
For locking piston valves together and to the valve stem, a Flex-Loc nut (or equal) should be used. It is a self-locking nut that will stay put and will also stand the heat. Do not use, under any conditions, the standard Esna (or equal) plastic self-locking nut for locking slide valves or piston valves to their valve stems or piston rods since they may fail under the steam heat inside the cylinder. However, Esna nuts are excellent as self-locking nuts where they are not in contact with steam.

Graphited twine is normally used for piston rod and valve stem packing, but Teflon turned to fit the gland cavity is excellent. After turning, slit the Teflon 45° to get it over the piston rod or valve stem. When tightening the gland nuts, go easy since Teflon takes up very quickly. On water pump rams, Teflon will work where graphited twine will fail in a hurry. Hemp packing is used on water pump rams in industry.

Make all piston rods and valve stems from stainless steel, making certain that all nicks and tool marks are removed where the rod passes through the gland. Polishing back and forth the length of the rod rather than polishing when the rod is revolving in the lathe will extend the life of the packing.

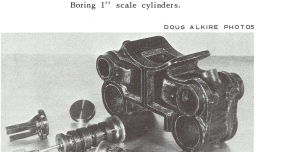
The Greenly double ported piston valve is an English design and it is claimed that there is less steam leakage from the live steam chamber to the exhaust chamber on Live Steam locomotives than with the standard piston valve. The 1" scale Little Engines' Atlantics and Pacifics use this design.

Check valves, suction and discharge valves give trouble because they are permitted to lift too high rather than not far enough. When a ball lifts too high at high speed with no return spring, it has a tendency to float in the liquid rather than return to its seat. Make certain that the balls are stainless steel by soaking them in faucet water for about two weeks before installation. Carbon steel balls frequently get mixed up with stainless steel balls. A ball that shows rust must not be installed in a water pump. Bronze balls and Teflon balls are satisfactory for water service.

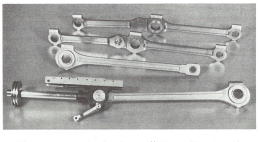


Boring 1" scale cylinders.

DOUG ALKIRE PHOTOS



Steel cylinders fabricated by welding by Douglas Alkire.



Piston, crosshead and rods for 1" B & O "President."

L = Lift for maximum volume through port $L=\frac{d}{8}$
D = Diameter of ball = 1.41 x d for 45° angle of seat
d = Diameter of port = .707 x d for 45° angle of seat

CHECK VALVE

cast iron

steel

brass, copper, etc.

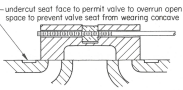
aluminum

babbitt and insulation

MATERIAL SYMBOLS

ALTERNATE
BULL RING DESIGN

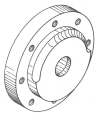
undercut seat face to permit valve to overrun open space to prevent valve seat from wearing concave



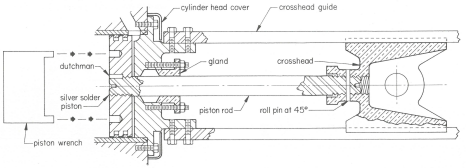
SLIDE VALVE

TO SIMULATE PENNSY
VALVE CHAMBER COVER

ALTERNATE
GLAND DESIGN



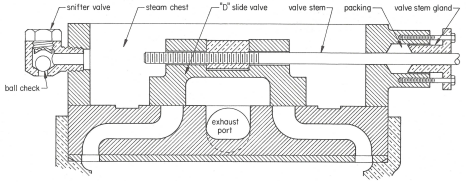
CYLINDER HEAD



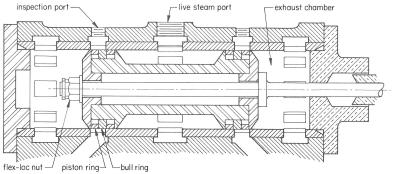

PISTON, PISTON ROD AND CROSSHEAD ASSEMBLY

CYLINDERS AND THEIR MOVING PARTS

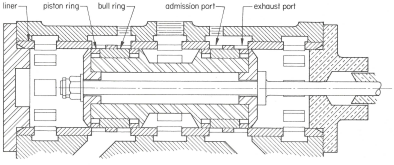
JPN/wct




SLIDE VALVE




STANDARD PISTON VALVE




GREENLY DOUBLE-PORTED PISTON VALVE (ENGLISH)

## VALVES

JFN/wct

# A Visit From St. Nick

'Twas the night before Christmas,
And all up the line
Not an engine was stirring,
Not even old number 9.
The switches were buried,
And their lantern's red glow
Gave a jollified look
To the deep drifted snow.
I dozed in the depot,
And upset the spitoon
As a whistle up Northway
Blasted a tune!
Then off up the main
There 'rose such a clatter
I ran out to the platform
To see what was the matter.

A little old engine,
All billowed in steam
Was plowing straight towards me
As through in a dream!
A little old bogger,
White beard and round belly,
Was yanking the bell
To beat the old Nelly!
"I don' t need no orders!"
He yelled through the snow,
"I'm the only danged train
"On this road that can go!
"I'm an extra that makes
"This run only tonight – –
"Happy Christmas, you Boomer,
"And to all a good night."

FROM SCOTTIES LIVE STEAM NEWSLETTER

# Season's Greetings from Doris, Paul and Bill Fitt

# In Cullman, Alabama

by AUSTIN F. BARR, JR.
Mid-West Secretary BLS
President MiS L S

The Mid-South Live Steamers held their fall meet at the track of H. M. Buettner in Cullman, Alabama on September 16th, 1967.

A good turn-out and a kindly weather man made the meet a great success.

Shown in the photo are (l to r) Paul Craft, Columbia, Tenn.; Harry Wade, Brentwood (Nashville area), Tenn.; Lynn G. Lowe, Kingsport, Tenn.; Anson W. Cooper, Florence, Ala.; Austin F. Barr, Jr., Harrisburg, Ark.; R. F. Wilson, Memphis, Tenn.; Charles Blevins, Florence, Ala.; Danny Smelser, Cullman, Ala.; and Joe Ed Gaddes, Franklin, Tenn. The locomotive is the 1½" Pacific of host H. M. Buettner and the engineer is an unidentified neighbor boy.

LEO REMPFROE

*WILLIAM HAWLEY BOWLUS of Pacoima, California, passed away on Sunday, August 27th, 1967, while launching his boat.*

*Hawley was a member of the Los Angeles Live Steamers with a long interest in large-scale model railroading. A week before his death, he completed arrangements with Winton Brown to handle the Bowlus line of equipment along with the Winton steam models.*

*His life was active and interesting and included work in the design and construction of the "Spirit of St. Louis" in which Charles A. Lindberg made his historic flight in 1927. He taught both Charles and Ann Lindberg to soar in sailplanes and held this country's 82 Glider License, signed by Orville Wright.*

*In 1960 Hawley and his son, Jack, formed the present Bowlus Engineering, Inc., and their first product was the Flo-Torque Clutch developed in 1946 for their backyard railroad. His hobby interests and engineering ability helped him to develope a model Diesel engine with electrical traction engines on the axles powered by a small gas turbine.*

*Live Steamers will miss Hawley, and extend their sympathies to his family.*

# In Michigan

The second meeting of the newly-organized Michigan Steam Locomotive Club met on October 21st at Harry Herder's track near Kalamazoo, Michigan.

Nearly 40 Live Steamers attended the meet with five 1½" steamers and three diesels in operation.

Harry's track covers about a mile and a half along a valley with plenty of opportunity for all kinds of running . . . straight, curves, trestles and tunnels with a new line that spirals up the end of the valley to a new double-track stretch that is still under construction.

With two 4–4–0's, a 4–4–2, a 4–6–4 and a 4–8–2 smoking up the fall foliage on the Rock Valley Lines, there was a full day of activity in Michigan.

# Hurricane Beulah Hits Live Steamer

CAROL DRYDEN

L. L. Yates of Falfurrias, Texas, reports that his Reviere, Falfurrias & Fremont Railroad is out of business as a result of the recent hurricane and flood. The trackwork shown in the photo are the remains of his facilities which included a 460-foot loop and a 300-foot lead between the shop and the oval. How about organizing a Texas-size work bee to help Mr. Yates get back in operation?

## NJLS "WHISTLE BLAST" HAS NEW EDITOR

Paul B. Boivin, Jr. has taken over the editor's desk at the *WHISTLE BLAST*. Paul has been editor of several hobby club bulletins over the years and will tackle the work with pent up enthusiasm.

He has been very active in "0" gauge and has been building locomotives, cars and layouts since 1945. In 1947 he says the Live Steam bug bit him when a friend offered him and his Dad a ride behind a ¾" New Haven 4–8–2. Paul is currently building a ¾" scale New Haven 4–6–2 and the chassis is now almost complete. An experimental steel boiler with stainless steel flues is being built for it by Ralph Green, who is Secretary of the NJLS.

Good luck to you, Paul, on this project!

### REGULAR RUN DAYS

**GOLDEN GATE LIVE STEAMERS**
Every Sunday, Weather Permitting
2½" – 3½" – 4¾" – 7½" Gauge
Joseph W. Bryan, Secretary
1225 Scott Street
El Cerrito, California 94530

**JAMUL VALLEY RAILROAD CLUB**
3rd Sunday of each month
7½" Gauge
Charles Underhill, Secretary
4675 Cavenido Avenue
San Diego, California 92107

**LOS ANGELES LIVE STEAMERS**
1st Saturday & Sunday each month
3½" – 4¾" – 7½" Gauge
W. Ross Crawford, Secretary
6900 Royer Street
Canoga Park, California 91304

**NEW JERSEY LIVE STEAMERS**
1st and 3rd Sundays each month
3½" – 4¾" – 7½" Gauge
Ralph Green, Secretary
845 Kilsyth Road
Elizabeth, New Jersey 07208

**SOUTHERN CALIFORNIA LIVE STEAM CLUB**
3rd Sunday of each month
3½" – 4¾" – 7½" Gauge
K. G. Kapner, Secretary
2764 Maple
Rialto, California 92376

**WABASH, FRISCO & PACIFIC ASSN.**
Every Sunday – 12" Gauge
George F. Kiesel, Jr.
6347 N. Rosebury Avenue
St. Louis, Missouri 63105

## DISNEY COMMEMORATIVE STAMP PROPOSED

A recent newspaper editorial brought out the suggestion that a commemorative stamp be issued in honor of Walt Disney. The late Stan Chovil, in turn, brought the matter before the Los Angeles Live Steamers where Walt Disney was a member, and a letter of support has been sent from that group.

Inasmuch as Walt Disney was a great fan of steam railroading, it would be appropriate for all Live Steamers to join the LALS in sending a letter to further the stamp suggestion.

"Personally, I feel the stamp, while being circulated around the world, would be a very suitable memorial to a great man from his countrymen," writes Joel Corbin, Editor of the LALS *ENGINE BOOSTER*. We most heartily agree.

If anyone is interested in having Mr. Disney honored in this way, they may send a letter to: Postmaster General Lawrence F. O'Brien, Washington, D. C., 20260.

## F. NELSON BLOUNT KILLED IN PLANE CRASH

Most of us, if we could afford it, would purchase as many steam locomotives as we could and put them in a roundhouse. We would set up a museum, lease some trackage rights and run as many of the engines as we could on fantrips.

The steam locomotive fraternity has just lost such a man. On August 31st, 1967, F. Nelson Blount was killed in a crash of his light plane near Bellows Falls, Vermont.

The owner of the Edaville R. R. at South Carver, Massachusetts and Steamtown at Bellows Falls was careful, however, to set up foundations which would assure their continued operation after his death. In fact, the very next day a double-header was run for the NRHS convention in Albany, N. Y.

Nelson has done more to preserve operable full-size steam locomotives than anyone else in this country. His ex-CPR G-5's are being widely used on fan trips in the east. We are in his eternal debt, I knew him well.

ROSS CRAWFORD IN THE LALS "ENGINE BOOSTER"

## LAST CALL FOR LISTINGS IN DIRECTORY OF LIVE STEAMERS

NAME: _____

STREET: _____ TEL. NO. _____

TOWN: _____ STATE: _____ ZIP: _____

I am a member of BLS ☐ YES ☐ NO, and OWN ☐ or have built ☐ in _____ (YEAR) a miniature live steam locomotive,

SCALE: _____, GAUGE: _____, TYPE: _____

WHEEL ARRANGEMENT: _____, DESIGNED BY: _____

_____, CASTINGS BY: _____

I have _____ feet of track, OTHER EQUIPMENT: _____

I would like other BLS members to visit by appointment: ☐ YES ☐ NO.

Belong to Steam Clubs: _____

Would you buy a $2 directory of all BLS Members ☐ YES ☐ NO
Please send names of Non-members you know on separate card.

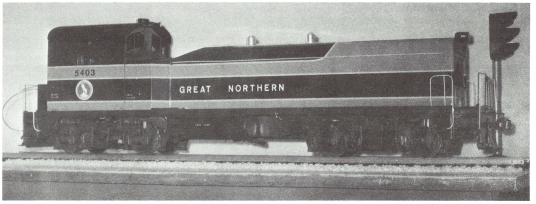
Work on the new Directory of Live Steamers is under way and a deadline of December 31st, 1967 must be placed on information to be included. We cannot guarantee that data received after that date will be listed.

If you have not already sent in one of the original cards that were sent out a couple of years ago or one that has appeared in recent issues of LIVE STEAM, please do so immediately.

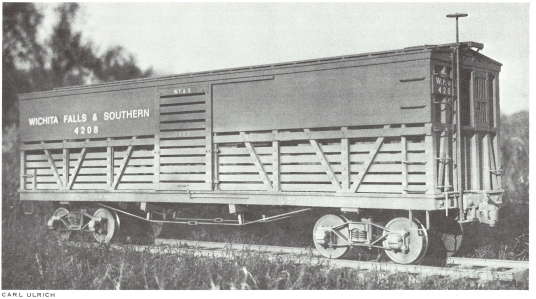
Each Live Steam Club, too, is requested to supply us with a map showing location of their track as well as access routes from the main highways. A city, county or township map with the information indicated in TRANSPARENT Magic Marker will be adequate. We will make up final art work. Remember the DEADLINE – DECEMBER 31st, 1967!

# WINTON ADDS MORE STEAM AND A DIESEL IN NEW CATALOG

Winton Engineering Company announces that their new 3rd Edition Catalog is now ready and also that they have made arrangements to offer the Bowlus line of 1½" scale 1360# rail and model of the EMD NW3 Light Road Switchers built for the Great Northern. The new catalog (which has full-color front and back covers) also lists new steam locomotives, a 3" scale air compressor and complete track accessories as well as a veritable handbook of Live Steam engineering notes. A background of 35 years experience in the engineering, design and fabrication of steam equipment places Winton Engineering in a position to custom design and build any type of railroad equipment. See Winton's ad on page 24 of this issue of LIVE STEAM.




NEW PRODUCTS NEW PRODUCTS NEW PRODUCTS NEW PRODUCTS NEW PRODUCTS NEW PRODUCTS NEW PRODUCTS NEW PRODUCTS




CARL ULRICH

When two perfectionists decide to produce 1½" scale cars, the result is sure to be perfection. Bill Zimmer has an interest in old time freight cars and enjoys building in wood. Carl Ulrich developed patterns to build metal parts for his own equipment and combines them with Bill's wood super-structures. Together they produce results as shown in the photo above of their first offering...a turn-of-the-century stock car. This car pictured, incidentally, is to operate on their 7-7/16" gauge track but bolsters, we understand, will be offered for 7¼" and 7⅞" gauge as well! Check their ad on page 24 of this issue and drop them a line (and 25¢) for all the information.

# M & W ZIMMER MODELS IS NEW ENTRY IN 1½" SCALE EQUIPMENT FIELD

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## BEAR CREEK JUNCTION

We were pleased to see Robert Maynard's lead article on Bear Creek Junction.

Our tourist line is entirely within the Nantahela National Forest and is a part of the Graham County Railroad — only railroad anywhere using Shay power only on a daily freight haul (Robbinsville to Topton) where we join the Southern Railroad.

Bear Creek Station is at the junction of two streams — Tulula and Bear Creek — hence the name.

We hope to be here a long time. We have a 20-year lease on property and we give ourselves 3 more years to reach a breakeven point.

Come see us — we love steam!

GILBERT A. FOSS
GENERAL MANAGER
BEAR CREEK JUNCTION R. R.

## SUPERELEVATION, NO! SUPERHEATERS, SI!

Fred Massey's letter in the last issue was a point well taken. But it sure puts me on the spot. As I see it, a suggestion like this falls into one of three catagories: (a) A subject I know nothing about. (b) A subject I know little about, but will expound upon at the drop of a hat, and (c) A subject I feel I know enough about to write on.

As far as superelevation goes, this would come under (a). I have had no experience in track laying and even less in superelevation. However, to change the word superelevation to superheating would put the item into (b) and the following comments, it is hoped, will spark others to come forth with their ideas on this controversial subject.

While I'm for superheat in theory, I'm especially convinced that it is worthwhile in practice. 99% of my running time has been behind a ¾"-0—4—0T engine — a sister to Carl Purinton's reliable "Granny." This engine has 2 two-element superheaters of the usual 3/16" copper tube with copper block return bends. The throttle is in the dome with the snifter valve working on the wet header. The drafting on this engine favors the lower flues so that the superheater flues do not receive the brunt of the hot gasses. The 3" x 4" grate is at frame level and feeds the 7" flues directly without a combustion chamber. This engine will run — pulling the driver only — on an 8—1 water to coal ratio (by weight) and will consume about one pound of coal per hour with continuous uninterrupted running. I'm not the best fireman in the world and often the steam pressure will drop well below the 90-pound blow-off level. The important thing noticed is that with the gauge needle barely off the pin but with a bright fire, the engine can be very lively. On the other hand, with the needle on 30-pound or 40-pound pressure, but with a black or dying fire, the engine has no pull at all. I attribute this simply to superheat. After all, we are dealing with a heat engine and the hotter the steam going into the cylinders, the more work comes out. This "phenomenon" if you will, has been observed many times and has me convinced that superheat is beneficial other than reduced coal and water consumption. I wonder if the drivers of larger engines have noticed this performance difference with superheat.

Superheaters are certainly simple to install, the main points to remember being: (1) Use copper block return bends; (2) Bronze weld the return bends if possible. Do NOT use phos copper. It will not stand the sulphur present in the hot gasses. (3) The return bends should be located not more than 75% of the tube length from the smokebox tube sheet. (4) Arrange the drafting so that the lower flues carry most of the load — usually a lowered blast nozzle will do this.

Expected life? I'm told Bob Hannum's Erie 10-wheeler ¾" had superheater trouble at the recent Southwick Meet and for the first time in 15 years of considerable running. How about me? Yep, mine let go after approximately 150 hours of running and it was noted that the phos copper used on the return bends had disappeared! No trouble since with the engine having been steamed over 100 times by actual count.

So much for personal experience. We still don't have solid facts. Al Milburn had one of his engines rigged with pyrometer probes in the steam lines to determine actual temperature differences at various points. I don't recall ever hearing any figures from him, but am sure this would prove most interesting and prove at least how much extra heat the superheaters contribute. Lastly, look at the data in the "Locomotive Cyclopedia" on superheat in the late model engines. The heating surface devoted to superheat in relation to the total heating surface is worth pondering.

Those are my thoughts on this most interesting subject. I wonder how others feel.

WILLIAM I. TREADWAY
252 BREWSTER RD.
BRISTOL, CONN. 06010

## WOULD-LIKE-TO-SEE DEPARTMENT

The articles by Mr. Galloway last March and April were very good and I was wondering if you could give us thoughts on track laying, particularly on turnouts and crossovers, and foundations for such. I hope to lay my own track some day when I get my loco finished, so I am interested in picking the other guy's brains. The question is whether to lay a modest track and improve it as time goes by, or lay a first rate track right off the bat.

THOMAS BALLANTYNE
6 DUNKELD AVE.
ST. CATHARINES, ONT., CANADA

One good article to write about would be fuels — kerosene, diesel fuel — coal — naphtha — butane — Varosel.

Have tried all with not too good results but butane which is next to try. Fuels either not hot enough or smell too bad and smart eyes, etc.

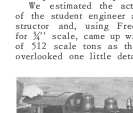
I have an 1½" rail bender which I will let anyone use upon payment of postage both ways — a deposit or good references.

C. K. BECK
1420 N. MC CULLOUGH AVE.
SAN ANTONIO, TEXAS 78210

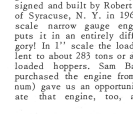
# ...from the cupola

Fred Kiesel's article in the September issue of LIVE STEAM intrigues us and we have studied it whenever we had a spare minute. It's interesting to apply his conversion figures to the prototype weights, for example, of an engine that you would like to build. As with all figures, though, it is important to keep *all* the factors in mind in order to get accurate results. As a case in point let's take our comments about the cover photo on that September issue.

We estimated the actual weight of the student engineer and his instructor and, using Fred's figures for 3/4" scale, came up with a figure of 512 scale tons as the load. We overlooked one little detail: the en-



gine (which, incidentally, was designed and built by Robert C. Hannum of Syracuse, N. Y. in 1964) is a 1" scale narrow gauge engine, which puts it in an entirely different category! In 1" scale the load is equivalent to about 283 tons or about 4 or 5 loaded hoppers. Sam Bassin (who purchased the engine from Bob Hannum) gave us an opportunity to operate that engine, too, and it's a



beauty. Stephenson valve gear, superheat, and a single-cylinder steam feed pump of Bill VanBrocklin's design all attest to the craftsmanship of its designer and builder. Perhaps one day we will be able to talk Bob into preparing an article on the construction of this engine... we'll give it a try!

–W.C.F.–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(*Editor's Note: The above item was erroneously listed as 1" scale rail in the October issue of LIVE STEAM.*)

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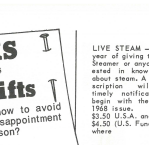

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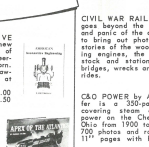

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